



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,109	08/27/2001	Stanley D. Echols	8257/29	4289

7590

05/21/2003

Robert J. Veal  
BURR & FORMAN LLP  
Post Office Box 830719  
Birmingham, AL 35283-0719

EXAMINER

GAGLIARDI, ALBERT J

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/940,109

Applicant(s)

ECHOLS ET AL.

Examiner

Albert J. Gagliardi

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)  
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rahn (Potassium Iodide as a Chemical Actinometer for 254 nm Radiation: Use of Iodate as an Electron Scavenger) in view of Chalkley (US 3,710,109) and Brown *et al.* (US 6,067,855).

Regarding claim 1, *Rahn* discloses an apparatus for measuring UV fluence in a space comprising a containment vessel having a transmissively passive wall containing an actinometric fluid therein that is optically opaque at a known wavelength (abstract; p. 451, col. 1, par. 3).

*Rahn* does not specifically identify the shape of the vessel.

Regarding the use of a spherical vessel, *Chalkley* discloses that vessels used for actinometric measurements can be of any of a variety of shapes such as a bottle like container that can be sealed wherein the shape may be cylindrical, square or other geometric shapes (col. 1, lines 49-52. Those skilled in the art appreciate that other functionally equivalent shapes of vessels (such as spherical ampoules -- see for example *Brown* at col. 5, lines 54-57 -- are well known and would have been an obvious design choice within the skill of a person of ordinary skill in the art depending on the needs of the particular application in view of their known functional equivalence.

Regarding claims 2-3, *Rahn* discloses that the solution is an aqueous solution of 0.6 M iodide and 0.1 M iodate in 0.01 M borate at pH 9.25 and is optically opaque at 254 nm and insensitive to radiation above 330 nm (abstract).

Regarding claim 4, *Rahn* discloses that the vessel is quartz (p. 451, col. 1, par. 3).

Regarding claim 5, although *Rahn* discloses that the vessel has a volume of about 2 cubic centimeters, absent some degree of criticality, the use of other volumes, such as about 1 cubic centimeter, would have been a matter of routine design choice depending on the needs of the particular application.

Regarding claim 6, absent some degree of criticality, a molar concentration of iodide and iodate of about 3:5 and pH 9.25 would have been a matter of routine design (if not inherent) property of the solution disclosed by *Rahn* depending on the needs of the application and the desire to optimize the solution according to the particular measurement parameters desired.

Regarding claim 7, although *Rahn* discloses that the measuring means configured to measure the absorbance is a spectrometer, those skilled in the art appreciate that other devices, such as a colorimeter, are known for the functional equivalent purpose of measuring absorption and would have been an obvious design choice.

Regarding claim 8, absent some degree of criticality and depending on the needs of the application, it is well known to use a plurality of devices for effecting a plurality of measurements over a larger volume.

Regarding claim 9, absent some degree of criticality, a neutral buoyancy would have been a matter of routine design choice (if not inherent) property of the solution disclosed by *Rahn* depending on the needs of the application and the desire to optimize the solution according to the particular measurement parameters desired.

Regarding claim 10, the apparatus as suggested according to claim 1 above suggest a method of determining UV fluence as recited according to claim 10 except for the specifically recited formula. Regarding the specific formula, although *Rahn* does not disclose the specific formula, *Rahn* discloses formulas related to dose response curves at various wavelengths including approximately 470 nm (Fig. 2), and other formulas and procedures for determining UV fluence (p 454, Discussion section) from which a variety of functionally equivalent formulas including the specifically recited formula can be derived. As such, the use of the specifically recited formula is viewed as a matter of routine design choice within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

Art Unit: 2878

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (703) 305-0417. The examiner can normally be reached on Monday thru Friday from 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Albert J. Gagliardi  
Examiner  
Art Unit 2878

AJG  
May 13, 2003